

MICROFICHE LABEL -- SPECIAL TITLE

ATTENTION DATA ENTRY

Please use the following title for the label on this fiche:

UNION CARBIDE - 2-ETHYLHEXANOIC ACID

Microfiche # OTS 0206613

Document ID # \_\_\_\_\_

OFFICE OF TOXIC SUBSTANCES  
CODING FORM FOR GLOBAL INDEXING

REV. 7/27/82

Microfiche No. (7) •	OTS 0206613	1	No. of Pages	2
Doc I.D.	278 214663	3	Old Doc I.D.	4
Case No.(s)	OTS 84003A			5
Date Produced (6)	12/1/42	6	Date Rec'd (6)	8
	7/8/72	7	Conf. Code •	N
Check One:	<input type="checkbox"/> Publication	<input type="checkbox"/> Internally Generated	<input checked="" type="checkbox"/> Externally Generated	9
Pub/Journal Name				9
Author(s)				10
Organ. Name	UNION CARBIDE CORP			11
Dept/Div	CORP HEALTH SAFETY & ENVIR AFF			12
P.O. Box	13	Street No./Name	14	
City	15	State	17	Country
		CT	06817	
MID No. (7)	19	D & B NO. (11)	20	
Contractor	MELLON INST INDUS RES			21
Doc Type	R.I. • U.P. • H.E.A.S.D 8.D. • S.O H.S F.N			22
Doc Title	SUMMARY OF RANGE FINDING REPORT			23
ON 2-ETHYL HEXOIC ACID WITH COVER				
LETTER				
Chemical Name (300 per name)	25	CAS No. (10)	24	
2-ETHYLHEXANOIC ACID		149-57-5		

MM  
3-14

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UNION CARBIDE CORPORATION OLD RIDGEBURY ROAD, DANBURY, CT 06817  
Corporate Health, Safety and Environmental Affairs Department

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

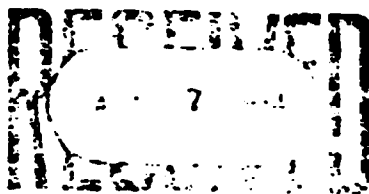
August 1, 1984

Subject: Union Carbide 8(d) Report  
40 CFR 716.6 & 716.7

U.S. Environmental Protection Agency  
TSCA 8D  
P. O. Box 2060  
Rockville, Maryland 20852

Sirs:

With respect to:



Chapter I of Title 40 of the Code of Federal Regulations; Subpart A, Secs. 716.6 & 716.7; as amended by adding 716.17(a) (8), Federal Register 40, P. 22286, May 29, 1984; Sec. 8(d), Pub. L. 94-469, Stat. 2029 (15 U.S.C. 2607 (d)); Union Carbide Corporation herewith submits the attached copies of studies and lists of studies in compliance with the above-identified regulation. Included in this report are studies for:

Bisphenol A  
√2-Ethylhexanoic Acid

CAS No. 80-05-7 (I)  
CAS No. 149-57-5 (II)

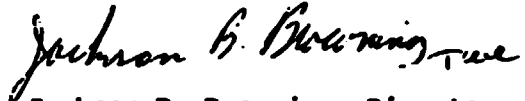
There is no information in the enclosed copies of studies or lists of studies for which Union Carbide asserts claims of confidentiality. The printed words "BUSINESS CONFIDENTIAL" or "Confidential" at the top of pages for some reports was for the internal guidance of Union Carbide personnel at the time of report issuance and does not represent a Union Carbide Corporation claim for confidential handling of the information, submitted pursuant to TSCA Sec. 8(d) rules.

Where some lines are deleted from certain reports, especially earlier ones, it is solely due to the fact that the deleted information pertains to chemicals or substances other than those for which reporting is required under the above rule. Union Carbide has included copies and lists of studies for only those chemical substances that are members of categories which it has manufactured or processed since 1973. Union Carbide Corporation believes that the enclosed copies of studies and lists of studies represent all of the studies which Union Carbide's file search has identified to date as reportable under the above-identified rule. Should any reportable studies be discovered subsequently, they will be forwarded immediately.

The Environmental Protection Agency and other appropriate government agencies are free to use the enclosed information as necessary in the normal discharge of their mandated responsibilities. However, identified authors, whether employees of Union Carbide or elsewhere, or their organizations are the rightful owners of the publication rights to the contained information.

If you have questions concerning the enclosed reports and lists of studies or wish to request further basic underlying data pertinent to the studies, please contact me or Dr. Donald L. Heywood (203-794-5224) of this Department.

Very truly yours,



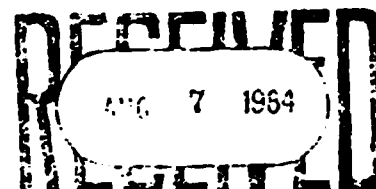
Jackson B. Browning, Director  
Health, Safety and Environmental  
Affairs (203) 794-5227

JAB:mjm  
Enclosure

MELLON INSTITUTE OF INDUSTRIAL RESEARCH  
UNIVERSITY OF PITTSBURGH

## SPECIAL REPORT

on

SUMMARY OF RANGE FINDING REPORT ON 2-ETHYL HEXOIC ACID

Carbide and Carbon Chemicals Company Industrial Fellowship No. 274-6

The sample of 2-ethyl hexoic acid was procured from Fellowship 155 on 9-17-42 and was the usual commercial grade. This study was conducted to furnish readily available information upon its toxicity.

Single Dose by Mouth

Single doses to male albino rats of a 10% dispersion in <sup>1%</sup> "Tergitol" 7 resulted in the prompt death of all rats receiving 10 gm./kg. and the survival of those receiving 1 gm./kg. The approximate LD<sub>50</sub> is therefore 3.0 gm./kg. The livers of the victims were mottled, and the stomach and upper intestine had an opaque white, cooked appearance.

Single Dose by Skin Absorption

The application of the undiluted material to the intact skin of guinea pigs for 4 days resulted in the death of two-thirds of the animals receiving 10 gm./kg. and the survival of those receiving 1 gm./kg. The skin was dry and slightly cracked on the abdomen of those dying promptly. The survivors had normal skin at the end of the 14-day holding period. The approximate LD<sub>50</sub> is 6.3 gm./kg.

Vapor Exposures

No vapor exposures were made because of the very low vapor pressure of the material.

Local Action

Necrosis of the cornea of the rabbit eye is produced by the application of 0.001 ml. of the undiluted material. On the rabbit belly in the vesicant test the undiluted material produces erythema, and a 10% dilution in acetone does likewise, while 1% in acetone gives no reaction.

Summary

Single doses by mouth to male albino rats resulted in an approximate LD<sub>50</sub> of 3.0 gm./kg. This places 2-ethyl hexoic acid in Grade 3 of our oral toxicity rating system along with sorbic and lactic acids. The LD<sub>50</sub> by skin absorption for guinea pigs in the 4 day contact period is 6.3 gm./kg. Slight dryness and cracking of the skin occurs with 10 gm./kg. after a 24 hour contact period. The undiluted material is in Grade 5 of our eye burn rating system as 0.001 ml. produces corneal necrosis of the rabbit eye. Undiluted and 10% dilutions in acetone cause erythema of the skin of rabbit bellies. The eye hazard is obvious and based on the above findings any prolonged contact with the skin should be avoided. No saturated vapor exposures were made because of the low vapor pressure which obviates any vapor hazard when the material is not heated.

Charles P. Carpenter - rmg

*Charles P. Carpenter*  
INDUSTRIAL FELLOW

T: 12-15-42

OFFICE OF TOXIC SUBSTANCES  
CODING FORM FOR GLOBAL INDEXING

REV. 7/27/82

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		7 Conf. Code •	N	8
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Author(s)				10
Organ. Name				11
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Dept/Div				12
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MID No. (7)	19	D & B NO. (11)		20
Contractor				21
MELLOW INST INDUS RES				
Doc Type				22
•R.I. •U.P. •H.E.A.S.D 8.D. •S.O.H.S F.N				
Doc Title				23
PROGRESS REPORT FOR MONTH				
ENDED MARCH 31, 1943				
Chemical Name (300 per name)		25	CAS No. (10)	24
2-ETHYL NITRAIC ACID			149-57-5	

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Report 6-33

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87824664

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UNIVERSITY OF PITTSBURGH

Received: 4-6-43

RH6 4/12/43  
Approved Date

PROGRESS REPORT for the month ended March 31, 1943

Carbide and Carbon Chemicals Corporation Industrial Fellowship No. 274-6

000002

Saturated Vapors

The following data on the exposure of guinea pigs to substantially saturated vapors at room temperature are complete:

<u>Material</u>	<u>Mortality*</u>
-----------------	-------------------

2-ethyl hexoic acid

8 hr. 0%

\* 6 guinea pigs were used in each exposure.

H. F. Smyth, Jr. - mg

T: 4-7-43

  
SENIOR INDUSTRIAL FELLOW

  
INDUSTRIAL FELLOW

  
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CODING FORM FOR GLOBAL INDEXING

REV. 7/27/82

Microfiche No. (7) •	OTS 0206613		1	No. of Pages	2
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Author(s)					10
Organ. Name	UNION CARBIDE CORP				11
Dept/Div	CORP HEALTH SAFETY & ENVIR AFF				12
P.O. Box	13	Street N	Name	OLD RIDGE BURY RD	14
City	DANBURY	15	State	CT	16
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Doc Type	• R.I. • U.P. • H.E.A.S.D. 8 D. • 30 H.S. F.N.				22
Doc Title	PROGRESS REPORT				23
FOR MONTH ENDED NOVEMBER 30, 1951					
Chemical Name (300 per name)				25	CAS No. (10)
2-ETHYL HEXANOIC ACID					149-52-5

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Report 14-78

R: 11-23-51

LHP 11/20/51

## MELLON INSTITUTE OF INDUSTRIAL RESEARCH

## UNIVERSITY OF PITTSBURGH

PROGRESS REPORT for the month ended November 30, 1951

Carbide and Carbon Chem. Div., U.C.C.

Industrial Fellowship No. 274-14

Subjects under )  
which report is )  
to be indexed )Work in Progress  
Special ReportsMisc. Toxicity Data  
Trips and MeetingsWork in Progress

The following projects have been started. Those marked with an asterisk (\*) are finished except for tissue study or report writing.

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2-Ethyl hexoic acid 1.26 (0.85 to 1.87) ml./kg.

OFFICE OF TOXIC SUBSTANCES  
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REV. 7/27/82

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Pub/Journal Name					9
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Author(s)					10
Organ. Name	UNION CARBIDE CORP				11
Dept/Div	CORP HEALTH SAFETY & ENVIRONMENTAL AFF				12
P.O. Box		13	Street No./Name	OLD RIDGE BURY ROAD	14
City	DANBURY	15	State	CT	16
			Zip	06817	17
			Country		18
MID No. (7)		19	D & B NO. (11)		20
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Doc Type	• R.I. • U.P. • H.E.A.S.D. S.D. • S.U.H.S.F.N				22
Doc Title	MISCELLANEOUS TOXICITY STUDIES				23
Chemical Name (300 per name)	25		CAS No. (10)	24	
2-ETHYL HEXOIC ACID			149-52-5		

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2. d.

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Special Report 35-15

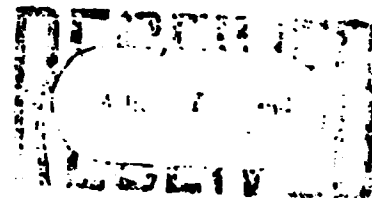
R: 2-1-72

Chemical Hygiene Fellowship  
MELLON INSTITUTE  
Carnegie-Mellon University

Miscellaneous Toxicity Studies

Editor: C. S. Weil

For: UNION CARBIDE CORPORATION, Chemicals and Plastics Operations Division



2-Ethylhexoic Acid

Sample 35-30

Skin Irritation, Rabbit

Minor irritation. Grade 4.

Eye Irritation, Rabbit

Severe irritation. Grade 9.

878214666

n-Butyraldehyde

2-Ethylhexoic Acid

M. I. Sample No. 35-30

Initiator: R. C. Lemon

Charge No. 04609 and 05428

Skin Irritation, Rabbit

Conditions - Standard. Applied undiluted.

Conclusions - Marked capillary injection on 3, moderate erythema on 2 rabbits.  
M. I. Grade 4.

Eye Irritation, Rabbit

Conditions - Standard. Applied undiluted or dissolved in propylene glycol (PG).

Conclusions - Marked corneal injury from 0.005 ml undiluted or from 0.5 ml of 40, 15 or 5% PG solutions; some iritis. Trace injury, at most, from 0.5 ml of a 1% PG solution.  
M. I. Grade 9.

FOR DESCRIPTION OF TESTS REFER TO STANDARD TEST PROCEDURES

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OFFICE OF TOXIC SUBSTANCES  
CODING FORM FOR GLOBAL INDEXING

REV. 7/27/82

Microfiche No. (7) •	OTS 0206613		1	No. of Pages	2
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Case No.(s)	OTS 84003A		5		
Date Produced (6)	09 25 72	6	Date Rec'd (6)	08 07 84	7
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Pub/Journal Name					9
					9
Author(s)					10
Organ. Name	UNION CARBIDE CORP				11
Dept/Div	CORP HEALTH SAFETY & ENVIR AFF				12
P.O. Box	13	Street No./Name	OLD RIVER ROAD		14
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		17	Zip	06817	18
MID No. (7)		19	D & B NO. (11)		20
Contractor	MELLON INST INDUS RES				21
Doc Type	• R.I. • U.P. • HEALTH & SAFETY STUD. • SUBS EN				22
Doc Title	MISCELLANEOUS TOXICITY STUDIES				23
Chemical Name (300 per name)	25		CAS No. (10)	24	
2-ETHYL HEXOIC ACID			149-57-5		

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Special Report 35-67

R: 9-25-72

Chemical Hygiene Fellowship  
MELLON INSTITUTE  
Carnegie-Mellon University

Miscellaneous Toxicity Studies

Editor: C. S. Weil

For: UNION CARBIDE CORPORATION, Chemicals and Plastics Operations Division

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Results of Department of Transportation Corrosive Test

(4-Hour Covered Skin Exposure)

Title 49 - Transportation  
Chapter 1 - Hazardous Materials Regulations Board  
Department of Transportation

*To amend §173.240 to provide a quantitative definition  
for corrosive materials by utilization of a 4-hr  
exposure time, using the rabbit test as described in  
21 CFR §191.11*

---

M. I.  
SAMPLE  
NUMBER

PRODUCT

RESULTS AND CONCLUSION

---

2-Ethylhexoic acid

35-417

2 of 4 rabbits with necrosis!  
a corrosive material

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## CODING FORM FOR GLOBAL INDEXING

Microfiche No. (7) •	OTS 0206613		1	No. of Pages	2
Doc I.D.	278.2 4668	3	Old Doc I.D.	8DS	4
Case No.(s)	OTS 84003A II				5
Date Produced (6)	060784	6	Date Rec'd (6)	080284	7
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Pub/Journal Name					9
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Author(s)					10
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		17	Zip	06817	18
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Contractor	MELLOW INST INDUS RES				21
Doc Type	• R.I. • U.P. • H.E.A.S.D 8.D. • S.W. H.S. E.N				22
Doc Title	ENVIRONMENTAL DATA				23
Chemical Name (300 per name)	25		CAS No. (10)	24	
2-ETHYLHEXANOIC ACID			149-57-5		

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8-10

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2. f.

2-Ethylhexanoic Acid  
Summary of Environmental Data  
Union Carbide Corp.

June 7, 1984

878214668

ENVIRONMENTAL DATA

2-Ethylhexanoic Acid  
(CAS 149-57-5)

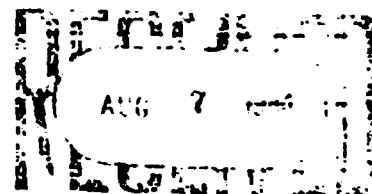
FROM REPORT 1

Water Solubility, percent wt.	0.1
Theoretical Oxygen Demand,	
Carbonaceous, Mg/mg	
Calculated	2.44
Measured	--
Bio-oxidation, percent	
Unacclimated (Acclimated)	
Day 5	60
Day 10	76
Day 15	82
Day 20	83

REPORT REFERENCES

Report 1 - Waggy, G. T., Payne, J. R., "Environmental Impact Analysis, Product Biodegradability Testing", Progress Report, August 12, 1974, File No. 19751, Research and Development Department, Union Carbide Corporation.

Note: Information is from Table I of this report. The text of the report was included in the Union Carbide submission in response to 9/2/82 Federal Register Final Rule (47FR38780).



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